

REMARKS

Reconsideration and allowance of the present application are respectfully requested. Claims 28, 32, 41, 43, and 53-91 remain pending in the application. Claims 28, 32, 41, 43, 53, 55, 57, 68, 80, 83, 86 and 89 are independent claims. By the foregoing amendment, claims 28, 57, 68 and 80-88 are amended; and claims 89-91 are added. No new matter is added.

Applicants acknowledge with appreciation the Examiner's indication that claims 32, 55 and 56 are allowed (paragraph 8 of the Office Action), and the indication that claims 66, 67, 78 and 79 contain allowable subject matter (paragraph 9 of the Office Action). However, it is respectfully submitted that all pending claims are patentably distinct in their present form. The Examiner has failed to recognize significant differences possessed by the presently claimed invention over the documents relied upon in the Office Action.

In paragraph 4, pages 2-6 of the Office Action, claims 28, 53, 54, 57, 58, 61-64 and 80-88 stand rejected as being unpatentable over U.S. Patent No. 6,049,328 (Vanderheiden) in view of U.S. Patent No. 5,890,116 (Itoh et al.). In paragraph 5, pages 6-8 of the Office Action, independent claims 41 and 43 stand rejected as being unpatentable over U.S. Patent No. 5,374,924 (McKiel, Jr.) in view of the Itoh et al. patent. In paragraph 6, pages 8-11 of the Office Action, claims 59, 60, 65 and 68-77 stand rejected as being unpatentable over the Vanderheiden patent and the Itoh et al. patent in view of the McKiel, Jr. patent. These rejections are respectfully traversed.

Applicants have disclosed a method for providing sound effects in which, among other disclosed features, an output characteristic of a sound effect can be

varied using a data structure which includes variable parameters associated with at least one of gain, delay and pitch of an identified sound (e.g., page 8, and specifically at lines 18-28). Applicants have further disclosed that frequency variation can be introduced to provide some auditory variety in both the one-shot and looping sound effects (e.g., page 11, lines 14-16). Accordingly, a common identified sound can be varied to produce different sound effects for different state transitions by varying one or more of these output parameters (page 8, lines 24-26). Advantageously, small adjustments in a recorded sound effect can be made without actually re-recording the effect (page 8, lines 26-28).

Applicants have further disclosed dividing drag sounds into three segments: an attack segment, a sustain segment and a decay segment, each of which segments can be recorded separately and identified individually in the loaded theme data file or in the code which runs the theme (e.g., page 9, lines 22-25). Applicants have further disclosed that the attack segment is played first to initiate the drag operation (e.g., page 9, lines 25-26). Then, the sustain segment is repeated while the drag operation continues. Once the drag operation terminates, the decay segment is played to gradually transition out the sound effect associated with this drag operation. As with the one-shot sound effects, the looping sound effects can also be adjusted by gain, delay and pitch variables which can be individually established for each effect (e.g., page 10, lines 2-4)

The foregoing features are broadly encompassed by independent claims 28, 41, 43, 53, 57 and 68. For example, claim 28 recites, among other features, a variable associated with gain of an identified sound; a variable associated with delay of the identified sound; and a variable associated with pitch of the identified sound to

vary a produced sound effect, wherein at least one of a first sound segment for initiating said sound effect, a second sound segment which is repeatable to sustain said sound effect, and a third sound segment for decaying said sound effect can be adjusted based on at least one of the variables associated with gain, delay or pitch of an identified sound to vary the produced sound effect.

Claims 89-91 are added with support found in the specification. For example, claim 89 recites a method of providing user feedback in a graphical user interface for a computer, comprising, in response to a user action that is performed with respect to an element of the graphical user interface, changing the display of said element from a first state to a second state (e.g., page 7, lines 20-24); identifying a stored sound effect that is associated with a transition from said first state to said second state (e.g., page 7, lines 24 and 25); and reproducing said identified sound effect in conjunction with said change in display states of said element (e.g., page 7, lines 19 and 20). Claim 90 recites the method of claim 89, wherein values for variable parameter are used for reproducing said identified sound effect (e.g., page 8, lines 21-24). Claim 91 recites the method of claim 90, wherein using the same stored sound effect, different values are used for different transitions (e.g., page 8, lines 25 and 26).

The applied references, when considered individually or in combination as suggested by the Examiner, do not teach or suggest the features recited in independent claims 28, 41, 43, 53, 57, 68, 80, 83, 86 and 89. Accordingly, Applicants respectfully submit that the claims are allowable.

The Vanderheiden and Itoh et al. Patents

In numbered paragraph 4, pages 3-5 of the Office Action, the Examiner variously admits that the Vanderheiden patent does not expressly teach, e.g., "wherein the at least one data structure includes a variable parameter associated with at least one of gain, delay and pitch of an identified sound to vary the produced sound effect." However, the Examiner asserts that "Itoh teaches a medium wherein an identified sound may be varied to produce different sound effects by varying one or more variable output parameters pertaining to a data structure." (See, e.g., page 3 of the Office Action.) Applicants respectfully traverse the Examiner's ultimate conclusion.

Claim 28 recites, among other features, a variable associated with gain of an identified sound; a variable associated with delay of the identified sound; and a variable associated with pitch of the identified sound to vary a produced sound effect, wherein at least one of a first sound segment for initiating said sound effect, a second sound segment which is repeatable to sustain said sound effect, and a third sound segment for decaying said sound effect can be adjusted based on at least one of the variables associated with gain, delay or pitch of an identified sound to vary the produced sound effect; claim 53 recites, among other features, identifying a sound effect using a state table, said sound effect being associated with a transition from a first display state to a second display state, and varying an output characteristic of said sound effect using a data structure which includes a variable parameter associated with at least one of gain, delay and pitch of the identified sound effect to vary the output characteristic; claim 57 recites, among other features, producing a

plurality of sound segments resulting from an object's movement on a graphical user interface, the plurality of sound segments using at least one data structure which includes a variable parameter associated with at least one of gain, delay and pitch of an identified sound to vary at least one of the sound segments; and claim 68 recites, among other features, a processor for controlling the speaker to produce a sound effect in response to movement of the object from the first display position, the sound effect having a plurality of sound segments that are each associated with the object's movement on a graphical user interface, the plurality of sound segments using at least one data structure which includes a variable parameter associated with at least one of gain, delay and pitch of an identified sound to vary at least one of the sound segments. Claims 81, 83 and 86 likewise variously recite a respective one variable associated with an aspect of an identified sound, wherein at least one of a first sound segment for initiating said sound effect, a second sound segment which is repeatable to sustain said sound effect, and a third sound segment for decaying said sound effect can be adjusted based on the variable. Claim 89 recites that the display of a user interface element changes states in response to a user action performed on that element and, in conjunction therewith, a sound effect associated with that change in display states is reproduced. The Vanderheiden patent and the Itoh et al. patent, individually or in combination as suggested by the Examiner, would not have taught or suggested at least these claimed features.

As admitted by the Examiner, and as previously argued of record, the Vanderheiden patent would not have taught or suggested a data structure including a variable associated with at least one of gain, delay and pitch of an identified sound

to vary the produced sound effect as recited in claim 28, and as similarly recited in claims 53, 57, 68, 80, 83 and 86.

The Itoh et al. patent does not cure the deficiencies of the Vanderheiden patent. The Itoh et al. patent relates to sound playback in a conduct-along operation, wherein sound playback and image display are changed real-time following the updated parameters (col. 5, lines 11-20). The disclosed conduct-along operation relates to control of tempo, beat timing, accent and sound volume by analyzing the conducting graphic form produced by the trajectory of a mouse cursor (col. 5, lines 41-43). The Itoh et al. patent does not relate to sound effect being adjusted based on at least one of the variables associated with gain, delay or pitch of an identified sound to vary the produced sound effect. Accordingly, the Itoh et al. patent would not have taught or suggested sound effect being adjusted based on at least one of the variables associated with gain, delay or pitch of an identified sound to vary the produced sound effect, as recited in claim 28, and as similarly recited in claims 53, 57, 68, 80, 83 and 86.

There is no motivation to combine the Vanderheiden patent and the Itoh et al. patent. The Vanderheiden patent is directed to a specially arranged touch screen system for people with disabilities. The Itoh et al. patent is directed to a conduct-along system that can give expression to sounds and images. There is no suggestion for one to combine with another to achieve a data structure comprising at least a variable associated with a recited aspect of an identified sound. Even if combined as suggested by the Examiner, the Vanderheiden patent and the Itoh et al. patent would not have resulted in sound effect being adjusted based on at least one of the variables associated with gain, delay or pitch of an identified sound to vary the

produced sound effect, as recited in claim 28, and as similarly recited in claims 53, 57, 68, 80, 83 and 86.

With respect to claim 89, the Vanderheiden patent discloses the reproduction of sounds in connection with the movement of a user's finger across the surface of a touch screen. It does not, however, disclose that sounds accompany changes in the display state of a user interface element when a user performs an action with respect to that element.

Thus, independent claims 28, 53, 57, 68, 80, 83, 86 and 89 are allowable. Claim 54 depends from independent claim 53; claims 58-65 depend from claim 57; claims 69-77 depend from claim 68; claims 81 and 82 depend from claim 80; claims 84 and 85 depend from claim 83; and claims 87 and 88 depend from claim 86, and claims 90 and 91 depend from claim 89, and recite further advantageous features which further distinguish over the document relied upon by the Examiner.

The McKiel, Jr. and Itoh et al. Patents

On pages 6 and 7 of the Office Action, the Examiner variously admits that the McKiel patent does not expressly teach, e.g., "using a data structure which includes a variable parameter associated with at least one of gain, delay and pitch of an identified sound to vary the produced sound effect." However, the Examiner asserts that "Itoh teaches a medium wherein an identified sound may be varied to produce different sound effects by varying one or more variable output parameters pertaining to a data structure." (See, e.g., pages 6 and 7 of the Office Action.) Applicants respectfully traverse the Examiner's ultimate conclusion.

The Itoh et al. patent does not cure the deficiencies of the McKiel patent. As previously argued, the Itoh et al. patent does not relate to sound effect being

adjusted based on at least one of the variables associated with gain, delay or pitch of an identified sound to vary the produced sound effect. Accordingly, the Itoh et al. patent would not have taught or suggested a data structure which includes a variable parameter associated with at least one of gain, delay and pitch of an identified sound to vary the produced sound effect, as recited in claim 41, and as similarly recited in claims 43 and 68.

There is no motivation to combine the McKiel patent with the Itoh et al. patent and/or the Vanderheiden patent. The Itoh et al. patent is directed to a conduct-along system that can give expression to sounds and images. The McKiel patent is directed to producing special sound effects specially adapted for a blind user. The Vanderheiden patent is directed to a specially arranged touch screen system for people with disabilities. There is no suggestion for one to combine with another to achieve a data structure which includes a variable parameter associated with at least one of gain, delay and pitch of an identified sound. Even if combined as suggested by the Examiner, the McKiel patent with the Itoh et al. patent and/or the Vanderheiden patent would not have resulted in a data structure which includes a variable parameter associated with at least one of gain, delay and pitch of an identified sound to vary the produced sound effect, as recited in claim 41, and as similarly recited in claims 43 and 68.

Thus, independent claims 41, 43 and 68 are allowable. Claims 69-79 depend from independent claim 68; and claims 59, 60 and 65 depend from claim 57, which claim 57 was previously argued, and recite further advantageous features which further distinguish over the document relied upon by the Examiner.

Conclusion


For the foregoing reasons, Applicants consider the application to be in condition for allowance and respectfully request notice thereof at an early date. The Examiner is encouraged to telephone the undersigned at the below-listed number if, in the Examiner's opinion, such a call would aid in the examination of this application.

Respectfully submitted,

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